formed of N symbols (where N is an integer of 2 or more), wherein an auto-correlation function for said sequence of N symbols is in an impulse state.

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2 ~~3~~. (Amended) A packet receiver that receives packets, each packet including a training portion and a data portion used to initialize said packet receiver, said training portion being formed by serially connecting K sequences (where K is an integer of 2 or more), each of said K sequences being formed of N symbols (where N is an integer of 2 or more), the packet receiver comprising:

A2

a frequency-offset estimation means for estimating a frequency offset based on a phase difference between two neighboring sequences of K sequences of a received packet, each of said K sequences being formed of N symbols;

a frequency-offset compensation means for compensating a frequency offset contained in said received packet based on said frequency offset estimation; and

a channel impulse response estimation means for estimating an impulse response of a channel based on an output for which the frequency offset is compensated.

3 ~~4~~. (Amended) The packet receiver defined in Claim 2 ~~3~~, wherein:

an auto-correlation function of said N symbol sequences is in an impulse state; and

said channel impulse response estimation means comprises means for estimating a channel impulse response based on a sequence for which the auto-correlation function is in an impulse state, and a received training sequence.

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6 ~~7~~. (Amended) A packet receiver for receiving packets, each of said packets including a training portion and a data portion used to initially set a receiver, said training portion being formed by serially connecting K sequences (where K is an integer of 2 or more), each of K sequences being formed of N symbols (where N is an integer of 2 or more), said packet receiver comprising:

A3

a frequency offset estimation means for detecting a phase difference between a sequence received prior to NT (where T is a continuous time of one symbol) and a currently received sequence, and for estimating a frequency offset based on said phase difference;

a frequency offset compensation means for compensating said frequency offset by rotating the phase of a received signal in the frequency offset compensation direction based on a frequency offset estimation value; and

a channel impulse estimation means for estimating an impulse response of a channel based on an output from an output for which the frequency offset is compensated.

A3

7 ~~8~~. (Amended) The packet receiver defined in Claim ~~7~~ 6, wherein an auto-correlation function of said N symbol sequences is in an impulse state; and wherein said channel impulse response estimation means comprises means for estimating a channel impulse response based on a sequence in which the auto-correlation function is in an impulse state, and a received training sequence.

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9 ~~10~~. A packet receiving method for receiving packets, each of said packets including a training portion and a data portion to initially set a receiver, said training portion being formed by serially connecting K sequences (where K is an integer of 2 or more), each of said K sequences being formed of N symbols (where N is an integer of 2 or more), said method comprising :

estimating a frequency offset based on a phase difference between two neighboring sequences of K sequences of a received packet, each of K sequences being formed of N symbols;

compensating a frequency offset contained in said received packet based on a frequency offset estimation value; and

estimating an impulse response of a channel based on a received packet of which the frequency offset is compensated.

A4

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A4

~~11~~ 10. (Amended) The packet receiving method defined in Claim ~~10~~ 9, wherein said step of estimating an impulse response of said channel comprises estimating a channel impulse response by placing an auto-correlation function of said sequence of N symbols in an impulse state, and detecting a peak value of an autocorrelation value between a received signal and said sequence of N symbols.